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EXAMINER

PERVAN, MICHAEL

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/728,054	Applicant(s) PLETIKOSA ET AL.	
	Examiner Michael Pervan	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed October 15, 2008 have been fully considered but they are not persuasive.

The arguments submitted are substantially the same as those previously submitted on May 15, 2008. Examiner responds in a similar manner as was previously submitted in the Final Office Action.

In response to applicant's argument that incorporating the sensor and/or gauges of Straayer into Kocis and Osawa is not possible, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

2. Applicant's arguments with respect to claims 8, 15-20 and 26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 2-10 and 12-14 are objected to because of the following informalities: line 1 of each claim reads "the electronic device...". It should read "the hand-held electronic device...". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4-8, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocis et al (5,485,614; previously submitted by examiner) in view of Straayer et al (US 4,680,577; as submitted by applicant) in view of Friend (US 6,995,749).

In regards to claim 1, Kocis discloses (Fig. 1) an electronic device including:
a display screen (110);
a keyboard (120) coupled by a processor (chips 202 and 206) to the display screen and having a plurality of keys (Figs. 1-2; as can be seen from the drawings the

keyboard (120/212) has a plurality of keys and is coupled (connected) to the display screen (110) by a processor (chips 202 and 206)),

a command key ([Fn] key) for sending a command input signal to the processor while depressed in an activated position,

the processor programmed for causing the navigation indicator on the display screen to move in a direction corresponding to each of the at least one navigator control input positions when the combined character and navigation key is in such navigation control input position while the command input signal is simultaneously received from the command key (col. 9, lines 57-67).

Kocis does not disclose the combined character and navigation key being displaceable from a un-depressed position to a plurality of detectable input positions including a character input position corresponding to a character input for a displayable character and at least one navigation control input positions corresponding to a navigation control input for movement of a navigation indicator on the display screen.

Straayer discloses the combined character and navigation key being displaceable from a un-depressed position to a plurality of detectable input positions (Fig. 1 and col. 3, lines 7-15; the character and navigation key (multipurpose switch) can move in a plurality (five directions) of detectable input positions) including a character input position corresponding to a character input for a displayable character (Fig. 1 and col. 3, lines 7-15) and at least one navigation control input positions corresponding to a navigation control input for movement of a navigation indicator on the display screen (Fig. 1 and col. 3, lines 7-15).

It would have been obvious at the time of invention to modify Kocis with the teachings of Straayer, a combined character and navigation key, because it allows for easier and more accurate control of the cursor.

Kocis and Straayer do not disclose a hand-held device with a keyboard mounted within a face of the device.

Friend discloses a hand-held device with a keyboard mounted within a face of the device (Figs. 1-3).

It would have been obvious at the time of invention to modify Kocis and Straayer with the teachings of Friend, a handheld device with the display screen mounted within the face, because the device would be more portable and easier to carry around.

In regards to claim 2, Kocis and Straayer do not disclose the electronic device of claim 1 wherein the character and navigation key is a space bar key and the displayable character is a space character.

However, it would be have been obvious at the time of invention to modify Kocis and Straayer to have the space bar key incorporate the character and navigation key because a user's thumbs are always on the space bar key, allowing constant access to the character and navigation key and since both thumbs are on the space bar key, it would accommodate both left and right handed people.

In regards to claim 4, Kocis and Straayer disclose the electronic device of claim 1 wherein, in a text entry input mode, the processor is programmed for causing the

displayable character to be added to text displayed on the display screen when the combined character and navigation key is in any of the detectable input positions and no command input signal is simultaneously received (col. 9, lines 57-67).

In regards to claim 5, Kocis does not disclose the electronic device of claim 1 wherein a first of at least one navigation control positions corresponds to a left movement control input and a second of at least one navigation control positions corresponds to a right movement control input.

Straayer discloses the electronic device of claim 1 wherein a first of at least one navigation control positions corresponds to a left movement control input and a second of at least one navigation control positions corresponds to a right movement control input (Fig. 1 and col. 3, lines 11-21).

In regards to claim 6, Kocis does not disclose the electronic device of claim 1 wherein a first of at least one navigation control positions corresponds to an up movement control input and a second of at least one navigation control input positions corresponds to a down movement control input.

Straayer discloses the electronic device of claim 1 wherein a first of at least one navigation control positions corresponds to an up movement control input and a second of at least one navigation control input positions corresponds to a down movement control input (Fig. 1 and col. 3, lines 11-21).

In regards to claim 7, Kocis discloses the electronic device of claim 2 wherein the keys include a plurality of alphanumeric keys corresponding to alphanumeric character inputs (Fig. 11; as can be seen in the drawing, the keys are alphanumeric, since there are both number and letter keys), the alphanumeric keys being arranged in a plurality of rows across the face (Figs. 1 and 11; as can be seen in the drawing, the alphanumeric keys are arranged in a plurality of rows across the face), the space bar key being elongated relative to the alphanumeric keys and positioned on the face below the alphanumeric keys (Figs. 1 and 11; as can be seen from the drawing, the space bar is elongated and positioned on the face below the alphanumeric keys).

In regards to claim 8, Kocis and Straayer do not disclose the electronic device of claim 1 wherein the display screen is mounted within the face.

Friend discloses a handheld device with the display screen being mounted within the face (Figs. 1-3).

It would have been obvious at the time of invention to modify Kocis, Straayer and Osawa with the teachings of Friend, a handheld device with the display screen mounted within the face, because the device would be more portable and easier to carry around.

In regards to claim 21, Kocis does not disclose the electronic device of claim 1 wherein the combined character and navigation key has a first navigation control input position corresponding to movement of the navigation indicator in a first direction and a

second navigation control input position corresponding to movement of the navigation indicator in a second direction.

Straayer discloses the electronic device of claim 1 wherein the combined character and navigation key has a first navigation control input position corresponding to movement of the navigation indicator in a first direction (Fig. 1 and col. 3, lines 15-16, 18-19) and a second navigation control input position corresponding to movement of the navigation indicator in a second direction (Fig. 1 and col. 3, lines 16-18, 19-21).

In regards to claim 22, Kocis does not disclose the electronic device of claim 21 wherein the combined character and navigation key has a third navigation control input position corresponding to movement of the navigation indicator in a third direction and a fourth navigation control input position corresponding to movement of the navigation indicator in a fourth direction.

Straayer discloses the electronic device of claim 21 wherein the combined character and navigation key has a third navigation control input position corresponding to movement of the navigation indicator in a third direction (Fig. 1 and col. 3, lines 15-16) and a fourth navigation control input position corresponding to movement of the navigation indicator in a fourth direction (Fig. 1 and col. 3, lines 16-18).

In regards to claim 23, Kocis does not disclose the electronic device of claim 21 wherein the first navigation control position corresponds to a left movement control input

and the second navigation control position corresponds to a right movement control input.

Straayer discloses the electronic device of claim 21 wherein the first navigation control position corresponds to a left movement control input (Fig. 1 and col. 3, lines 18-19) and the second navigation control position corresponds to a right movement control input (Fig. 1 and col. 3, lines 19-21).

In regards to claim 24, Kocis does not disclose the electronic device of claim 21 wherein the first navigation control position corresponds to an up movement control input and the second navigation control input position corresponds to a down movement control input.

Straayer discloses the electronic device of claim 21 wherein the first navigation control position corresponds to an up movement control input (Fig. 1 and col. 3, lines 15-16) and the second navigation control input position corresponds to a down movement control input (Fig. 1 and col. 3, lines 16-18).

In regards to claim 25, Kocis does not disclose the electronic device of claim 22 wherein the first navigation control position corresponds to a left movement control input and the second navigation control position corresponds to a right movement control input, and the third navigation control position corresponds to an up movement control input and the fourth navigation control input position corresponds to a down movement control input.

Straayer discloses the electronic device of claim 22 wherein the first navigation control position corresponds to a left movement control input (Fig. 1 and col. 3, lines 18-19) and the second navigation control position corresponds to a right movement control input (Fig. 1 and col. 3, lines 19-21), and the third navigation control position corresponds to an up movement control input (Fig. 1 and col. 3, lines 15-16) and the fourth navigation control input position corresponds to a down movement control input (Fig. 1 and col. 3, lines 16-18).

6. Claims 3, 9-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocis et al in view of Straayer et al in further view of Osawa et al (US 2001/0033270; previously submitted by examiner).

In regards to claim 3, Kocis and Straayer do not disclose the electronic device of claim 1 wherein the combined character and navigation key provides tactile single click feedback to a user when the combined character and navigation key is moved to any of the input positions.

Osawa discloses the combined character and navigation key provides tactile single click feedback to a user when the combined character and navigation key is moved to any of the input positions (Fig. 2; by having dome switches, the character and navigation key would provide tactile single click feedback).

It would have been obvious at the time of invention to modify Kocis and Straayer with the teachings of Osawa, a displacement recovery means, by incorporating the

displacement recovery means of Osawa with the device of Kocis and Straayer because it would allow the user to feel when a key is input.

In regards to claim 9, Kocis and Straayer do not disclose the electronic device of claim 1 wherein the keyboard includes a resilient member acting on the combined character and navigation key for providing the tactile single click feedback to a user when the combined character and navigation key is moved to any of the input positions.

Osawa discloses the electronic device of claim 1 wherein the keyboard includes a resilient member acting on the combined character and navigation key for providing the tactile single click feedback to a user when the combined character and navigation key is moved to any of the input positions (Fig. 2; by having dome switches, the character and navigation key would provide tactile single click feedback).

It would have been obvious at the time of invention to modify Kocis and Straayer with the teachings of Osawa, a displacement recovery means, by incorporating the seesaw switch of Osawa with the device of Kocis and Straayer because it would allow the user to feel when a key is input.

In regards to claim 10, Kocis and Straayer do not disclose the electronic device of claim 9 wherein the keyboard includes a plurality of switches disposed on a printed circuit board adjacent the character and navigation key for detecting movement of the character and navigation key to the input positions, the plurality of switches including at least first and second switches and a central switch located between the first and

second switches, the character and navigation key being displaceable towards the printed circuit board and pivotally mounted relative to the central switch for activating the first switch and the central switch independently of the second switch when a first peripheral region of the character and navigation key is pressed and activating the second switch and central switch independently of the first switch when a second peripheral region of the character and navigation key is pressed.

Osawa discloses (Fig. 2) the keyboard includes a plurality of switches (contacts 51) disposed on a printed circuit board (base plate 5) adjacent the character and navigation key for detecting movement of the character and navigation key to the input positions, the plurality of switches including at least first and second switches and a central switch located between the first and second switches (Fig. 2; as can be seen from the drawing, there is a central switch (dome portion 71) with switches on either side of it), the character and navigation key being displaceable towards the printed circuit board and pivotally mounted relative to the central switch for activating the first switch and the central switch independently of the second switch when a first peripheral region of the character and navigation key is pressed and activating the second switch and central switch independently of the first switch when a second peripheral region of the character and navigation key is pressed (paragraph 27, lines 10-11 and paragraph 31; since the key (seesaw key) selects one out of five contacts and be moved downwardly or toward one direction to cause first or second switch (contacts 51) to activate).

For motivation to combine, refer to claim 10.

In regards to claim 12, Kocis and Straayer do not disclose the electronic device of claim 10 wherein the central switch includes the resilient member and the other switches provide substantially no biasing force against the character and navigation key.

Osawa discloses the central switch includes the resilient member and the other switches provide substantially no biasing force against the character and navigation key (Fig. 2; as can be seen from the drawing, the central switch (contact 51) contains a resilient member (dome portion 71) and the other switches (contacts 51) do not provide any biasing force since there is no contact between the key and the resilient members (dome portion 72)).

For motivation to combine, refer to claim 10.

In regards to claim 13, Kocis and Straayer do not disclose the electronic device of claim 10 wherein the central switch is a dome switch for providing single click tactile feed back when depressed by the character and navigation key and for biasing the character and navigation key into a resting position, the first and second switches being non-dome contact switches spaced apart from respective contact areas of the character and navigation key when the character and navigation key is in the resting position.

Osawa discloses (Fig. 2) the central switch is a dome switch (dome portion 71) for providing single click tactile feed back when depressed by the character and navigation key (Fig. 2; as can be seen from the drawing, when the key (seesaw key) is

depressed the central switch is compressed providing a tactile feedback (resistive force) towards the user) and for biasing the character and navigation key into a resting position (Fig. 2; as can be seen from the drawing, the central switch (dome portion 71) along with projection 62 provide bias the key into a resting position) the first and second switches being spaced apart from respective contact areas of the character and navigation key when the character and navigation key is in the resting position (Fig. 2; as can be seen from the drawing, the key (seesaw key) is in the resting position and the other switches are spaced apart).

For motivation to combine, refer to claim 10.

Osawa does not disclose the other switches being non-dome contact switches spaced apart from respective contact areas of the character and navigation key when the character and navigation key is in the resting position.

However, since the specification does not provide an advantage or benefit for having non-dome switches over dome switches, the examiner feels this to be a designer's choice because whether the switches are non-dome or domed, they will function in the same manner.

In regards to claim 14, Kocis and Straayer do not disclose the electronic device of claim 10 wherein the plurality of switches includes third and fourth switches, the first, second, third and fourth switches being symmetrically positioned about the central switch, the character and navigation key being displaceable for activating the third switch and the central switch independently of the fourth switch when a third peripheral

region of the character and navigation key is pressed and activating the fourth switch and central switch independently of the third switch when a fourth peripheral region of the character and navigation key is pressed.

Osawa discloses the plurality of switches includes third and fourth switches, the first, second, third and fourth switches being symmetrically positioned about the central switch (Fig. 3b; as can be seen from the drawing, the first, second, third and fourth switch are symmetrically positioned around the central switch), the character and navigation key being displaceable for activating the third switch and the central switch independently of the fourth switch when a third peripheral region of the character and navigation key is pressed and activating the fourth switch and central switch independently of the third switch when a fourth peripheral region of the character and navigation key is pressed (paragraph 27, lines 10-11 and paragraph 31; since the key (seesaw key) selects one out of five contacts and be moved downwardly or toward one direction to cause third or fourth switch (contacts 51) to activate).

For motivation to combine, refer to claim 10.

7. Claims 15-17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Kocis et al in further view of Straayer et al.

In regards to claim 15, Friend discloses a hand-held electronic device comprising:

a display screen (Figs. 1-3; display 120);

a keyboard (130) mounted within a face of the device (Fig. 3; as can be seen from the drawing, the keyboard is mounted within a face (housing 110) of the device) and coupled by a processor to the display screen (It is inherent that there be a processor coupling the keyboard to the display to allow for text to be displayed) and comprising a plurality of alphanumeric keys arranged in a plurality of rows across the face between an upper edge and a bottom edge of the face (Figs. 1-3; as can be seen from the drawing, the keyboard has a plurality of alphanumeric keys arranged in rows across the face), and a space bar key arranged closer to bottom edge of the face than the alphanumeric keys for inputting a space character for display on the display screen (Figs. 1-3; as can be seen from the drawing, a space bar key is arranged at the bottom of the face below the alphanumeric keys) and a processor for controlling the hand-held device, the processor coupled to the keyboard for receiving input signals therefrom and operatively coupled to the display screen (It is inherent that there be a processor coupling the keyboard to the display to allow for text to be displayed).

Friend does not disclose a command key for sending a command input signal to the processor while depressed in an activated position, the space bar key being displaceable from an un-depressed position to a plurality of detectable input position including at least one character input position corresponding to a character input for a displayable character and at least one navigation control input position corresponding to a navigational input for movement of a navigation indicator on the display screen and the processor programmed for causing the navigation indicator on the display screen to move in a direction corresponding to each of the at least one navigator control input

positions when the combined character and navigation key is in such navigation control input position while the command input signal is simultaneously received from the command key.

Kocis discloses a command key ([Fn] key) for sending a command input signal to the processor while depressed in an activated position (col. 9, lines 57-67) and the processor programmed for causing the navigation indicator on the display screen to move in a direction corresponding to each of the at least one navigator control input positions when the combined character and navigation key is in such navigation control input position while the command input signal is simultaneously received from the command key (col. 9, lines 57-67).

It would have been obvious at the time of invention to modify Friend with the teachings of Kocis, depressing a command key and navigation key simultaneously to control navigation, because it prevents accidental control of navigation.

Friend and Kocis do not disclose the space bar key being displaceable from an un-depressed position to a plurality of detectable input position including at least one character input position corresponding to a character input for a displayable character and at least one navigation control input position corresponding to a navigational input for movement of a navigation indicator on the display screen.

Straayer discloses the space bar key being displaceable from an un-depressed position to a plurality of detectable input position including at least one character input position corresponding to a character input for a displayable character and at least one

navigation control input position corresponding to a navigational input for movement of a navigation indicator on the display screen (col. 3, lines 7-26).

It would have been obvious at the time of invention to modify Friend and Kocis with the teachings of Straayer, multipurpose keyswitch, by incorporating the multipurpose keyswitch of Straayer into the spacebar of Friend and Kocis because it would allow for redundant cursor movement system, which gives the device a fail safe in case one of the cursor movement systems fails to operate.

In regards to claim 16, Friend and Kocis do not disclose the hand-held electronic device of claim 15 wherein the space bar key includes a left arrow navigational input component and a right arrow navigational input component.

Straayer discloses (Fig. 1) a left arrow navigational input component and a right arrow navigational input component (Fig. 1; as can be seen from the drawing, the navigational input component (multipurpose keyswitch) has both left and right arrow navigational component inputs).

For motivation to combine, refer to claim 15.

In regards to claim 17, Friend and Kocis do not disclose the hand-held electronic device of claim 16 wherein the space bar key includes an up arrow navigational input component and a down arrow navigational input component.

Straayer discloses an up arrow navigational input component and a down arrow navigational input component (Fig. 1; as can be seen from the drawing, the navigational

input component (multipurpose keyswitch) has both up and down arrow navigational component inputs).

For motivation to combine, refer to claim 15.

In regards to claim 26, Friend and Kocis do not disclose the hand-held electronic device of claim 15 wherein the space bar key includes an up arrow navigational input component and a down arrow navigational input component.

Straayer discloses the hand-held electronic device of claim 15 wherein the space bar key includes an up arrow navigational input component and a down arrow navigational input component (Fig. 1 and col. 3, lines 15-18).

For motivation to combine, refer to claim 15.

8. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Kocis et al in view of Straayer et al in further view of Osawa et al.

In regards to claim 18, Friend does not disclose the hand-held electronic device of claim 15 wherein the keyboard includes first and second dome switches disposed on a printed circuit board facing an underside of the space bar key, the space bar key being push-ably and pivotally mounted relative to the circuit board and having a left portion for activating the first dome switch when displaced towards the circuit board, and a right portion for activating the second dome switch when displaced towards the circuit board,

wherein the processor causes the navigation indicator on the display screen to effect a left arrow navigation when the first dome switch is activated independently of the second dome switch and simultaneously with receipt of the command input signal and a right arrow navigational input when the second dome switch is activated independently of the first dome switch and simultaneously with receipt of the command input signal.

Kocis and Straayer disclose wherein the processor causes the navigation indicator on the display screen to effect a left arrow navigation when the first dome switch is activated independently of the second dome switch and simultaneously with receipt of the command input signal and a right arrow navigational input when the second dome switch is activated independently of the first dome switch and simultaneously with receipt of the command input signal (col. 9, lines 57-67).

It would have been obvious at the time of invention to modify Friend with the teachings of Kocis and Straayer, command key and multipurpose keyswitch, by incorporating the command key and multipurpose keyswitch of Kocis and Straayer into the keyboard of Friend because it would allow for redundant cursor movement system, which gives the device a fail safe in case one of the cursor movement systems fails to operate and it would prevent from accidental movements of the cursor.

Friend, Kocis and Straayer do not disclose the keyboard includes first and second dome switches disposed on a printed circuit board facing an underside of the space bar key, the space bar key being push-ably and pivotally mounted relative to the circuit board and having a left portion for activating the first dome switch when displaced

towards the circuit board, and a right portion for activating the second dome switch when displaced towards the circuit board.

Osawa discloses (Fig. 2) the keyboard includes first (dome portion 72) and second (dome portion 72) dome switches disposed on a printed circuit board (base plate 5) facing an underside of the key, the key being push-ably and pivotally mounted relative to the circuit board (paragraph 31; the key can be pushed downward and is pivotable) and having a left portion for activating the first dome switch when displaced towards the circuit board, and a right portion for activating the second dome switch when displaced towards the circuit board (Fig. 3b; as can be seen from the drawing, the left and right arrows indicate the left and right portions, which can be displaced towards the circuit board (base plate)).

It would have been obvious at the time of invention to modify Friend, Kocis and Straayer with the teachings of Osawa, a navigational input component for moving a navigation indicator on the display screen, by incorporating the navigational input component of Osawa into the space bar of Friend, Kocis and Straayer because it would make the device thinner and more waterproof (paragraph 9, lines 2-3).

In regards to claim 19, Friend does not disclose the hand-held electronic device of claim 15 wherein the keyboard includes at least first and second directional switches and a central switch disposed on a printed circuit board facing an underside of the space bar key, the space bar key being pushably and pivotally mounted relative to the circuit board and having a left portion for activating the first directional switch when

displaced towards the circuit board, and a right portion for activating the second directional switch when displaced towards the circuit board, and a central portion between the left and right portions for activating the central switch when displaced towards the circuit board, the central switch applying a bias against the spacebar key for providing tactile feedback when the spacebar key is displaced towards the circuit board,

wherein the processor causes the navigation indicator on the display screen to effect a left arrow navigation when the first dome switch is activated independently of the second dome switch and simultaneously with receipt of the command input signal and a right arrow navigational input when the second dome switch is activated independently of the first dome switch and simultaneously with receipt of the command input signal.

Kocis and Straayer disclose wherein the processor causes the navigation indicator on the display screen to effect a left arrow navigation when the first dome switch is activated independently of the second dome switch and simultaneously with receipt of the command input signal and a right arrow navigational input when the second dome switch is activated independently of the first dome switch and simultaneously with receipt of the command input signal (col. 9, lines 57-67).

It would have been obvious at the time of invention to modify Friend with the teachings of Kocis and Straayer, command key and multipurpose keyswitch, by incorporating the command key and multipurpose keyswitch of Kocis and Straayer into the keyboard of Friend because it would allow for redundant cursor movement system,

which gives the device a fail safe in case one of the cursor movement systems fails to operate and it would prevent from accidental movements of the cursor.

Friend, Kocis and Straayer do not disclose the keyboard includes at least first and second directional switches and a central switch disposed on a printed circuit board facing an underside of the space bar key, the space bar key being pushably and pivotally mounted relative to the circuit board and having a left portion for activating the first directional switch when displaced towards the circuit board, and a right portion for activating the second directional switch when displaced towards the circuit board, and a central portion between the left and right portions for activating the central switch when displaced towards the circuit board, the central switch applying a bias against the spacebar key for providing tactile feedback when the spacebar key is displaced towards the circuit board.

Osawa discloses (Fig. 2) the keyboard includes at least first (dome portion 72) and second (dome portion 72) directional switches and a central switch (dome portion 71) disposed on a printed circuit board (base plate 5) facing an underside of the key, the key being pushably and pivotally mounted relative to the circuit board (paragraph 31; the key can be pushed downward and is pivotable) and having a left portion (projection 63) for activating the first directional switch when displaced towards the circuit board, and a right portion (projection 63) for activating the second directional switch when displaced towards the circuit board (Fig. 3b; as can be seen from the drawing, the left and right arrows indicate the left and right portions, which can be displaced towards the circuit board (base plate)), and a central portion (projection 62) between the left and

right portions for activating the central switch when displaced towards the circuit board (paragraph 31, lines 4-8; the central portion (projection 62) is positioned centrally and activates the central switch (dome portion 71)), the central switch applying a bias against the key for providing tactile feedback when the key is displaced towards the circuit board (Fig. 2; as can be seen from the drawing, once the central switch is depressed it will give a resistance pushing back towards the user providing the tactile feedback).

It would have been obvious at the time of invention to modify Friend, Kocis and Straayer with the teachings of Osawa, a navigational input component for moving a navigation indicator on the display screen, by incorporating the navigational input component of Osawa into the space bar of Friend, Kocis and Straayer because it would make the device thinner and more waterproof (paragraph 9, lines 2-3).

In regards to claim 20, Friend does not disclose the hand-held electronic device of claim 19 wherein the keyboard includes third and forth directional switches disposed on the printed circuit board facing the underside of the space bar key, the space bar key having an upper portion for activating the third switch when displaced towards the circuit board, and a lower portion for activating the forth switch when displaced towards the circuit board, the central portion being between the upper and lower portions,

wherein the processor causes the navigation indicator on the display screen to effect a left arrow navigation when the first dome switch is activated independently of the second dome switch and simultaneously with receipt of the command input signal

and a right arrow navigational input when the second dome switch is activated independently of the first dome switch and simultaneously with receipt of the command input signal.

Kocis and Straayer disclose wherein the processor causes the navigation indicator on the display screen to effect a left arrow navigation when the first dome switch is activated independently of the second dome switch and simultaneously with receipt of the command input signal and a right arrow navigational input when the second dome switch is activated independently of the first dome switch and simultaneously with receipt of the command input signal (col. 9, lines 57-67).

It would have been obvious at the time of invention to modify Friend with the teachings of Kocis and Straayer, command key and multipurpose keyswitch, by incorporating the command key and multipurpose keyswitch of Kocis and Straayer into the keyboard of Friend because it would allow for redundant cursor movement system, which gives the device a fail safe in case one of the cursor movement systems fails to operate and it would prevent from accidental movements of the cursor.

Friend, Kocis and Straayer do not disclose the keyboard includes third and forth directional switches disposed on the printed circuit board facing the underside of the space bar key, the space bar key having an upper portion for activating the third switch when displaced towards the circuit board, and a lower portion for activating the forth switch when displaced towards the circuit board, the central portion being between the upper and lower portions.

Osawa discloses the keyboard includes third (projection 72) and forth (projection 72) directional switches disposed on the printed circuit board facing the underside of the key, the key having an upper portion for activating the third switch when displaced towards the circuit board, and a lower portion for activating the forth switch when displaced towards the circuit board (Fig. 3b; as can be seen from the drawing, the up and down arrows indicate the upper and lower portions, which can be displaced towards the circuit board (base plate)), the central portion being between the upper and lower portions (Fig. 3b; as can be seen from the drawing, the dot in the center of all the arrows indicates the central portion, which is between the upper and lower portions).

It would have been obvious at the time of invention to modify Friend, Kocis and Straayer with the teachings of Osawa, a navigational input component for moving a navigation indicator on the display screen, by incorporating the navigational input component of Osawa into the space bar of Friend, Kocis and Straayer because it would make the device thinner and more waterproof (paragraph 9, lines 2-3).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pervan whose telephone number is (571) 272-0910. The examiner can normally be reached on Monday - Friday between 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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MVP

/Amr Awad/
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